DOCKET NO.: SUNSTAF-1026

Serial No.: 10/618,945

Amendment dated April 21, 2006

Response to Office Action of January 25, 2006

Page -2-

## Amendments to the Specification

Please replace the paragraph on page 4, lines 1-2 with the following amended paragraph:

PATENT

FIG. 3 is a partially enlarged cross-sectional view that is taken along the line I-I in FIG. 2 line III-III in FIG.2in a state when an electric motor is detached;

Please replace the paragraph on page 5, lines 11-16 with the following amended paragraph.

An electric motor 25 and a compression mechanism 26 are accommodated in the closed space 24. The electric motor 25 is a brushless direct current type or a brushless DC type brushless direct current (DC) type and includes a stator 25a and a rotor 25b. The stator 25a is fixedly connected to an inner surface 23a of the circumferential wall 23 of the first housing element 21. The rotor 25b is provided on the rotary shaft 27 and is arranged inside the stator 25a. The electric motor 25 rotates the rotary shaft by electric power that is supplied to the stator 25a.

Please replace the paragraph beginning on page 6, line 21 and ending on page 7, line 12 with the following amended paragraph.

Now referring to FIG. 3, a diagram illustrates a partially enlarged cross-sectional view that is taken along the line I-I in FIG. 2 line III-III in FIG.2. An outer surface 23b of the circumferential wall 23 is mostly formed along a cylindrical surface R having the central axis L. The first housing element 21 partially includes an accommodating portion 36. The accommodating portion 36 is provided on a portion of the outer surface 23b of the circumferential wall 23 and defines an accommodating space 35 inside. The accommodating portion 36 includes a frame-shaped side wall 37 and a cover member 38.

Serial No.: 10/618,945

Amendment dated April 21, 2006

Response to Office Action of January 25, 2006

Page -3-

The side wall 37 is integrally formed with the circumferential wall 23 and extends from the outer surface 23b. The cover member 38 is fixedly connected to the distal end surface of the side wall 37 by a fixing frame 40. In other words, the cover member 38 covers the opening of the side wall 37. The cover member 38 forms a thin plate and is made of metal such as an aluminum alloy. A seal member 39 is interposed between the distal end surface of the side wall 37 and the outer peripheral portion of the cover member 38 for sealing the accommodating space 35.

Please replace the paragraph beginning on page 8, line 14 and ending on page 9, line 1 with the following amended paragraph:

The motor drive circuit 41 includes a planar substrate 43 and a plurality of electrical components-44. The substrate 43 is fixedly connected to the circumferential wall 23 by a fastener, such as a bolt, which is not shown in the drawing. The substrate 43 is substantially in parallel with the central axis L of the motor compressor 10. The electrical components-44 are respectively mounted on surfaces 43a, 43b of the substrate 43. Namely, the electrical components-44 are respectively mounted on the substrate 43 on the near and far sides relative to the central axis L. Incidentally, the electrical components 44-include electrical components 44A through 44E and other electrical components, which are not shown in the drawing.

Please replace the paragraph on page 9, lines 3-8 with the following amended paragraph:

The electrical components-44 include known components for constituting the inverter. That is, the electrical components-44 include a switching device 44A, an electrolytic condenser 44B, a transformer 44C, a driver 44D, a fixed resistance and the like. The driver 44D is an integrated circuit chip or an IC chip for intermittently controlling the switching device 44A based on a command from the air conditioner ECU.

**PATENT** 

**DOCKET NO.: SUNSTAF-1026** 

Serial No.: 10/618,945

Amendment dated April 21, 2006

Response to Office Action of January 25, 2006

Page -4-

Please replace the paragraph on page 9, lines 10- 17 with the following amended paragraph:

The switching device 44A has a height of h3 from the substrate 43 and is mounted on the surface 43a of the substrate 43, that is, on the substrate 43 on the near side relative to the central axis L. Some of the electrical components-44 are shorter than the switching device 44A if they are mounted on the same surface. Only the above shorter electrical components-44 are mounted on the surface 43b of the substrate 43, that is, on the substrate 43 on the far side relative to the central axis L. The above shorter electrical components 44 include the driver 44D and the fixed resistance 44E.

Please replace the paragraph beginning on page 9, line 19 and ending on page 10, line 7 with the following amended paragraph:

Some of the electrical components-44 have <u>a</u> heights of h1; <u>and h2</u> from the substrate 43 and are taller than the switching device 44A. The taller electrical components-44 <u>44B and 44C</u> and the switching device 44A are mounted on the surface 43a of the substrate 43, that is, on the substrate 43 on the near side relative to the central axis L. The taller electrical components-44 include the electrolytic condenser 44B and the transformer 44C. Accordingly, among the electrical components-44 on the surface 43a of the substrate 43, the switching device 44A corresponds to a short electrical component that has a relatively short height of h3 from the substrate 43, and the electrolytic condenser 44B and the transformer 44C correspond to tall electrical components that have relatively tall heights of h1, h2.

Please replace the paragraph on page 10, lines 9-21 with the following amended paragraph:

Serial No.: 10/618,945

Amendment dated April 21, 2006

Response to Office Action of January 25, 2006

Page -5-

In the preferred embodiment, the electrical components 44 on the surface 43a are arranged as follows. The short electrical components such as the switching device 44A are arranged at the middle portion of the surface 43a of the substrate 43. The tall electrical components such as the electrolytic condenser 44B and the transformer 44C are arranged at both ends of the surface 43a, that is, the upper and lower ends of the surface 43a in FIG. 3. Namely, the short electrical components are arranged relatively closer to the central axis L, while the tall electrical components are arranged relatively farther from the central axis L. As arranged above, the motor drive circuit 41 is installed to the compressor housing 11 in such a manner that the electrical components 44 on the surface 43a of the substrate 43 line the cylindrical surface R of the circumferential wall 23. Incidentally, the switching device 44A, the electrolytic condenser 44B and the transformer 44C each are plurally arranged in the direction of the central axis L.

Please replace the paragraph on page 11, lines 16-21 with the following amended paragraph:

In the motor drive circuit 41 in the accommodating space 35, the electrical components-44 are arranged on the surface 43a of the substrate 43 along the cylindrical surface R of the circumferential wall 23. Therefore, the motor drive circuit 41 is arranged to approach the central axis L of the motor compressor 10 because the electrical components-44 line the cylindrical surface R of the circumferential wall 23.

Please replace the paragraph on page 12, lines 1-10 with the following amended paragraph:

The substrate 43 is arranged at a distance of h4 from the cylindrical surface R. The distance h4 is shorter than the height h1 of the electrolytic condenser 44B that is the tallest in the electrical components-44. The cylindrical surface R of the circumferential wall 23 approaches the surface 43a of the substrate 43 without any interference with the

Serial No.: 10/618,945

Amendment dated April 21, 2006

Response to Office Action of January 25, 2006

Page -6-

electrical components-44 on the surface 43a, that is, without crossing the electrical components-44 on the surface 43a. Namely, the motor drive circuit 41 is arranged near the central axis L of the motor compressor 10 so that the cylindrical surface R of the circumferential wall 23 is arranged at the distance h4 from the substrate 43 and the distance h4 is shorter than the height h1 of the electrolytic condenser 44B.

Please replace the paragraph on page 12, lines 12-18 with the following amended paragraph:

In the preferred embodiment, "the electrical components-44 line the cylindrical surface R of the circumferential wall 23<sup>22</sup> means a state where the the cylindrical surface R of the circumferential wall 23 approaches the surface 43a in such a manner that the distance h4 from the substrate 43 at least becomes shorter than the height h1 of the electrolytic condenser 44B while the cylindrical surface R of the circumferential wall 23 does not interfere with the electrical components-44 on the surface 43a.

Please replace the paragraph beginning on page 12, line 20 and ending on page 13, line 5 with the following amended paragraph:

Particularly, in the preferred embodiment, the cylindrical surface R of the circumferential wall 23 approaches the surface 43a of the substrate 43 in such a manner that the distance h4 from the substrate 43 becomes shorter than the height h2 of the transformer 44C, which is the second tallest, and the cylindrical surface R does not interfere with the electrical components-44 on the surface 43a. Accordingly, the electrical components-44 on the surface 43a adjacently line the cylindrical surface R of the circumferential wall 23 so that the motor drive circuit 41 is arranged near the central axis L much closer.

Serial No.: 10/618,945

Amendment dated April 21, 2006

Response to Office Action of January 25, 2006

Page -7-

Please replace the paragraph on page 13, lines 7-17 with the following amended paragraph:

In the motor drive circuit 41, the switching device 44A, the electrolytic condenser 44B and the transformer 44C are in contact with the bottom surface 35a of the accommodating space 35 through a sheet or a first insulating member 45 made of rubber or resin. Namely, the sheet 45 respectively is interposed between the electrical components 44A, 44B, 44C and the first housing element 21 made of aluminum, respectively. A material having properties of relatively high elasticity and/or relatively high heat conductivity is employed as the sheet 45. A clearance between the top surface 35c of the cover member 38 and the motor drive circuit 41 is filled with a filler or a second insulating member 46 made of rubber or resin. The filler 46 has properties of relatively high elasticity and/or relatively high heat conductivity.

Please replace the paragraph beginning on page 16, line 22 and ending on page 17, lines 1-10 with the following amended paragraph:

The short electrical components, such as the switching device 44A, are mounted on the surface 43a on the near side relative to the central axis L of the motor compressor 10 and are arranged closer to the central axis L. In addition, the tall electrical components, such as the electrolytic condenser 44B and the transformer 44C, are arranged on the surface 43a of the substrate 43 and are arranged farther from the central axis L. This arrangement allows the electrical components-44 on the surface 43a to line the cylindrical surface R of the circumferential surface 23. The accommodating portion 36 on the compressor housing 11 defines the accommodating space 35 for accommodating the motor drive circuit 41 in such a manner that the accommodating space 35 is formed along the cylindrical surface R of the circumferential wall 23.

DOCKET NO.: SUNSTAF-1026

Serial No.: 10/618,945

Amendment dated April 21, 2006

Response to Office Action of January 25, 2006

Page -8-

Please replace the paragraph on page 17, lines 12-19 with the following amended paragraph:

**PATENT** 

Accordingly, in the motor drive circuit 41 accommodated in the accommodating space 35, the electrical components-44 on the surface 43a of the substrate 43 line the cylindrical surface R of the circumferential wall 23. Since the electrical components-44 line the cylindrical surface R, the motor drive circuit 41 is arranged relatively close to the central axis L of the compressor housing 11. Thus, the protrusion of the motor drive circuit 41 from the compressor housing 11 is controlled at a relatively small amount so that the motor compressor 10 becomes small in diameter.